

WHAT IS CLAIMED IS:

1. A traveling-wave amplifier having π -type output transmission line structure wherein in a periodic manner

5 (a) the drain terminal of FET(1) is connected between drain lines, $L_d/2(1)$ and $L_d/2(2)$,

Fig 8 (b) the additional capacitance $C_3(1)$ is connected between drain lines $L_d/2(2)$ and $L_d/2(3)$,

10 (c) the gate terminal of the said FET(2) is connected between $L_g(1)$ and $L_g(2)$.

15 2. According to Claim 1, the traveling-wave amplifier having π -type output transmission line structure wherein x value representing the location of the additional capacitance (C_3) is $0 < x < 1$. If the length of the drain line between drain terminals of the said FET(1) and FET(2) is represented as L_d , the length of the said drain lines $L_d/2(1)$ and $L_d/2(3)$ is $(1-x)L_d$ and that of the said drain lines $L_d/2(2)$ and $L_d/2(4)$ is xL_d .

20 3. According to Claim 1, the traveling-wave amplifier having π -type output transmission line structure wherein the most effective bandwidth improvement can be gained when the x value is 0.5, where the additional capacitance C_3 is placed in the middle of the output transmission line (L_d).